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COMBINED FEEDBACK ON THE JUNE 2013 EXAM PAPER

UNIT R041:
REDUCING THE RISK OF
SPORTS INJURIES

SPORT SCIENCE Level 1/2

DECEMBER 2014

OCR Oxford Cambridge and RSA

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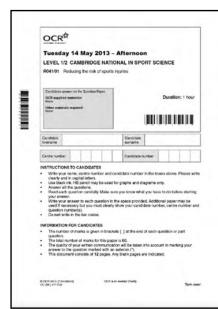
INTRODUCTION

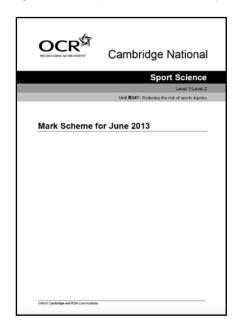
This resource brings together the questions from the June 2013 examined unit (R041), the marking guidance, the examiner's comments and the exemplar answers into one place for easy reference.

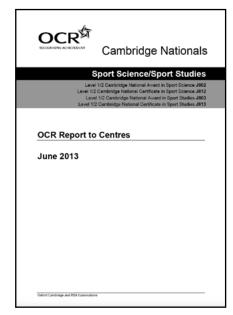
The marking guidance and the examiner's comments are taken straight from the Report to Centre for this question paper.

The Question Paper, Mark Scheme and the Report to Centre are available from:

http://www.ocr.org.uk/qualifications/cambridge-nationals-sport-science-level-1-2-j802-j812/







GENERAL EXAMINER COMMENTS ON THE PAPER

Centres are reminded that marking schemes are used as a basis for judgements and each examiner's professional judgement is used in finally deciding the marks awarded based on a rigorous standardised procedure. A level of response mark scheme relates to the final question – question 15. The mark scheme for this final question has a number of criteria separated into levels. Level descriptors also include statements related to the quality of written communication. The levels of response scheme also include indicative content that is expected in this question and this content is also taken into consideration when awarding marks.

This examination paper includes a multiple choice question which was answered accurately by most of the candidates.

Candidates are reminded that they must check near the end of the examination that they have answered all the questions set. In this series a minority of candidates left questions unanswered especially for questions 7, 9 and 12.

As in the January series, there was little evidence to suggest that candidates struggled to complete the paper within the time allowed.

Generally candidates used their knowledge and skills appropriately but some had difficulty with distinguishing between physical and psychological, for example in question 1 psychological benefits are asked for and yet many candidates wrote about psychological/mental benefits.

Many candidates were well prepared for this examination and were at the appropriate level to be examined in this session. The minority of candidates did not appear to be fully prepared for this examination and subsequently scored few marks.

The specification content had been covered effectively by most centres with candidates showing appropriate knowledge and understanding in many topic areas.

The 'command' word 'describe' was often used in questions but many candidates used single words which did not give the depth of information required. The command 'explain' demands more detail than 'describe' with candidates expected to give reasons rather than merely characteristics in their responses.

Centres should remind candidates to give examples when requested and to make sure the examples are well linked to their theoretical answer.

Question 15 demanded more extended writing from candidates and some wrote fluently and concisely giving good accounts with appropriate practical examples. Others merely wrote in note form and were unable to access the full range of marks because the quality of their written communication was not appropriate for this level of examination.

Centres are advised to refer closely to the requirements of the specification when creating teaching and learning programmes or schemes of work. The examples and definitions given in the specification often appear in the mark schemes, so the more familiar candidates are with the contents of the specification, including the vocabulary used, the better prepared they will be for the examination in this unit.

Ouestion 1 and 2

Answer **all** questions.

- 1 (a) Describe **two** psychological benefits of a warm up.
 - 1. Heightens/control arousal levels/'get in the zone'/settle nerves or gets you in the right frame of mind/mentally prepares/increase aggression/calming down
 - 2. Improve concentration/focus/selective attention

Other example answers

- Increase motivation/drive
- Mental rehearsal
- Increase confidence/reduce worry
- Reduce reaction time

[2]

(b) How might a psychological benefit help to reduce the risk of injury?

Optimum arousal/drive ensures performer is fully focused or makes no rash decisions or uses correct technique or under arousal may cause injury due to missing vital cues or over arousal cause injury as too 'wound-up'

Other example answers

- Concentration/on task/more aware/more alert allows correct decisions to be made
- Response time/reaction time improved/reaction to decisions quicker/beating an opponent to the ball/avoiding the tackle (or example)/being more alert

[1]

- **2** Which one of the following does the term R.I.C.E. stand for? (Circle your chosen option to indicate your answer.)
 - (a) Reassurance, Ice, Compress, Emergency
- (b) Rest, Ice, Compress, Elevate
 - (c) Rest, Insulin, Cold, Emergency
 - (d) Response, Intensity, Cool down, Elevate

[1]

- 1 (a) Two marks maximum for psychological benefits.Do not accept physical benefits.Do not accept prepare for the game.
- 1 (b) Must be relevant to reducing injury.

Examiner comments

Question 1(a) and 1(b)

Most candidates scored well if they interpreted the word 'psychological' properly. Some candidates gave physical benefits and could not therefore score marks. Other candidates gave good answers often related to motivation and concentration. Some candidates in (b) merely repeated what they had written for (a), others related their answer well to the reduction of risk of injury as required by the question.

Question 2

Most candidates recognised what the term RICE stands for and correctly circled the correct answer.

- **3** Using examples, describe **two** environmental factors that may cause injury to sports performers.
 - 1. Weather/climate/sun/rain/snow/ice eg wet football pitch causing players to slip/fall
 - 2. Playing surface/potholes/performance/surrounding area, eg falling on astroturf/colliding into advertising boards

Other example answers

- Litter/(sharp) objects/glass/stones/wet leaves
- Other participants eg being tackled in hockey
- Equipment in the environment eg goal posts/hit in the face by the ball

[2]

Mark Scheme Guidance

Any two answers listed acceptable for two marks maximum.

Answer must contain different examples of environmental factors or activity examples (no requirement for an activity example in the question) but BOD examples as equivalents eg hard football pitch (pt 2), slippery football pitch due to rain (pt 1).

Do not accept environment as an answer on its own.

Do not accept single word answers.

Examiner comments

Some candidates showed a good understanding of possible environmental factors that cause injury and were able to use practical examples well, for example the 'slippyness' of a pitch that may cause a football player to twist their ankle. Others did not recognise the word environmental or they did not give a relevant practical example and therefore scored few marks.

Question 4 and 5

4	A coach must carefully consider the characteristics of an individual or group when planning and delivering a warm up or cool down.
	Identify three of these specific characteristics of an individual or group.
	1. Size of group/large group/small group
	2. Age of participants/young participants/old participants
	3. Sex of participants/gender/whether group is mixed sex
	Other example answers
	Experience of participants or novice or expert or skill level of participants
	• Individual fitness levels/trained participants/unfit participants/previous injury/flexibility/size/ weight of participants
	Medical conditions participants may have asthma/diabetes or other named conditions
	• Disability
	[3]
5	Describe four physical benefits of a cool down.
	Gradually lowers/slows heart rate/blood pressure
	Gradually lower (body) temperature
	Maintain circulate blood/oxygen supply
	Gradually decrease breathing rate/stop feeling dizzy/faint/nausea/sick
	Other example answers
	Remove/gets rid of waste products/lactic acid or repays oxygen debt
	• Reduce risk of (muscle) soreness or stiffness/cramp/DOMS/muscle tension/seizing up or helps to relax/loosen up body/muscles
	Decreases rick of injury/pulling a payoda

- Decreases risk of injury/pulling a muscle
- Aid recovery (by stretching muscles)/facilitates participation following day or prevents feeling tired/fatigued
- Prevents blood pooling

[4]

- 4) Any three answers listed acceptable for three marks maximum.

 Answer must be related to characteristics of the individual/group and **not** to environmental/type of activity.
- One mark for each relevant point.
 Key word Gradually/slowly (Pt 1, 2, 4).
 Do not accept prevents lactic acid build up must be reference to reduce/lower (pt 5).
 Do not accept psychological benefits.

Examiner comments

Question 4

Candidates often showed a good understanding of what should be considered when planning and delivering a warm-up or cooldown. Those who related their answers to individuals or groups scored marks, for example, taking into account the age range of the group or the fitness level of the individual. Some candidates misunderstood the requirements of the question and gave some environmental factors as answers and consequently scored few marks.

Ouestion 5

This question asks candidates to describe and therefore candidates needed to show some developments in their points related to the physical benefits of a cool down. Candidates who gave a list of one word answers were unlikely to score well because of the lack of description. Many however gave good descriptions of the physical benefits for example to help get rid of lactic acid. Some candidates gave motivational or other psychological benefits and scored few marks because the question asks for physical benefits.

Question 6 (a) and (b)

6	(a)	Exercise is a common trigger for asthma.
		Give three symptoms that a coach should be aware of if someone in their class has been diagnosed with asthma. 1. Coughing
		2. Wheezing
		3. Shortness of breath/breathlessness/difficulty breathing/heavy breathing/panting/difficulty speaking
		Other example answers • Tightness in the chest • Pale/clammy skin
		Grey/blue lips (if attack severe)
		[3]
	(b)	Suggest two suitable ways in which the coach could respond and treat a performer suffering an asthma attack. 1. Reassurance/stay calm/keep them relaxed/make light conversation
		2. Sit them down or upright
		Other example answers
		Encourage them to take slow/steady breathsUse an inhaler/pump
		 Contact emergency services (if needed) or contact parents/carers Use of steroid (tablets – if prescribed)
		[2]

Mark Scheme Guidance

- 6 (a) Three marks maximum for identifying symptoms of asthma.
- 6 (b) Two marks maximum for stating appropriate ways to deal with asthma attacks.

Examiner comments

Most candidates correctly identified symptoms of asthma with the best candidates identifying three required for the full marks. Many candidates were able to give two suitable ways in which a coach could treat a performer suffering an asthma attack.

Question 7 (a) and (b)

A la	ck of exercise can be one cause of poor posture.	
(a)	Describe four other causes of poor posture.	
	1. Poor stance/gait/slouching or example of actions which may cause poor posture	'
	eg bending your knees when walking or hunching your shoulders when standing up/ technique/poor coaching	•
	2. Poor sitting or sleeping positions or example such as slumping/slouching on the sofa	rather
	than sitting upright or poorly designed/uncomfortable seats/chairs	• • •
	3. Physical defects such as muscles weakened around an injury area/muscular imbalance	e/
	injury/back problems	• • •
	4. Fatigue such as tired muscles (will be unable to support the skeleton properly)	•••
	Other example answers	
	Emotional/psychological/mental factors such as having low self-esteem or lack of	
	confidence can influence	
	Footwear or example such as wearing shoes with high heels	
	Poor carrying technique/heavy bags/poorly fitting rucksack	
	Genetic predisposition	
		[4]
(b)	Identify two types of sport injuries related to poor posture.	
(₩)	1. Delutionally	
	***************************************	• • •
	2. Lordosis	•••
	Other example answers	
	Kyphosis/hunched backRound shoulders	
	Kyphosis/hunched back	
	Kyphosis/hunched backRound shoulders	
	Kyphosis/hunched backRound shouldersScoliosisProlapsed/slipped disc	[2]

- 7 (a) Any four answers acceptable for four marks maximum.
 Do not accept lack of exercise as an answer.
 Do not accept single word answers (must describe).
- 7 (b) Any two answers listed acceptable for two marks maximum.

Examiner comments

Many candidates could describe two or three causes of poor posture but few could describe four causes effectively. Some candidates simply wrote one word answers such as 'sitting' or 'bending' which do not fulfil the requirement of the question to describe. In 7b some candidates gave two accurate types of sports injuries (listed in the specification). Some candidates left this part of the question unanswered or gave vague answers such as 'pulled muscles' that were not accurate enough to score marks.

Question 8

8 Chronic injuries are also known as overuse injuries.

Give **two** examples of overuse injuries in sport.

- 1. Tendonitis
- 2. Tennis elbow

Other example answers

- Golfer's elbow
- Shin splints
- Repetitive strain injury (RSI)
- Osgood-Schlatter (Disease)
- Runner's knee
- Dancer's hip
- Example of (chronic) shoulder injury/bowler's shoulder

[2]

Mark Scheme Guidance

Any two answers listed acceptable for two marks maximum.

Examiner comments

Most scored well for this question but some misunderstood the term 'chronic' – even though 'overuse injuries' appeared in the stem of the question. Candidates are reminded to be aware of the meanings of key words and phrases found throughout the specification. Many candidates recognised that tendonitis is often a result of overuse.

9 Describe how SALTAPS can be used to respond to injuries and medical conditions.

See – what happened/ask someone/stop play following injury/check facial expressions/posture

Ask – the player what happened/how they feel/where it hurts/questions player about the injury

Look – at what is injured/for signs of injury (bleeding, bruising, swelling, deformity)/compare to other limbs

Touch – the injured site for pain/tenderness/abnormalities

Active – can the player move the limb themselves (with or without pain)/non weight bearing movement

Passive – you move the limb/joint to full extent (note reaction)/taking movement further than active movement

Strength – can they hold/apply own weight/is the player able to get up?/provide resistance against injured part/can they stand-up following injury

Other example answer

• On-field assessment/routine/evaluate/assessment of whether a performer should continue to play/train

[7]

Mark Scheme Guidance

Any seven answers acceptable for seven marks maximum.

Description needed to gain allocated mark.

Examples may be given as descriptions.

One mark maximum if no description/example and SALTAPS correctly listed.

Examiner comments

This question differentiated well with good candidates linking the SALTAPS abbreviation with clear descriptions and were clear and well written, showing that good practise had been carried out in centres to prepare candidates for some extended writing. Others did not fully describe each aspect and some merely wrote what SALTAPS stands for. It is clear that for candidates to score full marks each letter in the abbreviation needed to be addressed and described. Candidates are urged to look at the marks allocated to each question to give them a good idea of how much to write and how many points to make – in this case seven points for seven marks.

Question 10 (a) and (b)

10 Mor (a)	Describe the medical condition of diabetes. It is a chronic illness Body unable to use glucose properly or to control blood sugar levels/ Glucose/sugar may be found in blood/urine or body has high sugar level
	 Other example answers Body not producing any/enough insulin Body is insulin resistant Might make you insulin dependent (type 1) Could create coma condition if not treated
(b)	[2] Describe the symptoms of Type 1 diabetes.
	High or low sugar levels Increased thirst

Other example answers

- Going to the toilet lots
- (Extreme) tiredness/unconscious/coma-like state
- Weight loss
- Odd behaviour or could be mistaken for 'drunkenness'
- Confusion or memory loss
- Pale/cold/sweaty skin
- Nausea/vomiting
- Blurred vision
- Dry mouth
- Slow healing cuts/sores
- Irritating skin/tingling skin
- Abdominal pain
- Trembling/shaking
- Red or swollen gums

[2]

- 10 (a) Two marks maximum for description of medical condition of diabetes. Do not credit other symptoms.
- 10 (b) Two marks maximum for symptoms.

Examiner comments

Some candidates were confused between diabetes and asthma but most showed a good understanding of the medical condition of diabetes with many recognising the symptoms of Type 1 diabetes.

 Describe tinee different ways in which a participant in a specific sport of activity may become injured.
Name of Sport/Activity: Rugby
1. (Hard) tackle
2. Being hit by a ball
3. Sprains from landing awkwardly

Other example answers

- Overuse injuries (shin splints from long distance running)/too much training
- (Strain) due to overstretching
- Falling or slipping over whilst performing
- · Colliding with other opponents/equipment eg goalposts
- Being fouled (eg high tackle)
- Injuring yourself fouling someone else or not playing by the rules or safe guidelines or behaving inappropriately/coaching inappropriate/dangerous techniques/strategies
- Not warming-up/stretching/preparing properly
- Incorrect/faulty equipment or lack of equipment eg shin pads
- Objects/glass on surface

[3]

Mark Scheme Guidance

Answers must be different examples of how they might get injured which are relevant to the activity identified.

If no activity identified one mark maximum.

Accept suitable equivalents.

Examiner comments

This question required an activity to be named which the vast majority did (mostly football) but some did not and could therefore not have access to the full marks available because the examiner is trying to assess the application of theory to practice. Many candidates answered this well and gave three valid ways in which you may get injured for a specific activity.

Question 12

12 All sporting clubs have a responsibility and duty of care to ensure a safe environment for participants and spectators and this is often highlighted in their Emergency Action Plan (EAP).	
Identify three different components of an Emergency Action Plan.	
1. Emergency personnel/first responder/first aider/coach	
2. Emergency communication/telephone/emergency contact numbers/emergency services/	
ambulance/999	
3. Emergency equipment/first aid (kits)/evacuation chair [3]	

Mark Scheme Guidance

Any order of the plan is accepted.

Examiner comments

The candidates who read this question carefully and simply identified the three components (in the specification) scored full marks. A minority of candidates clearly did not recognise these components and many of these gave irrelevant answers.

Personal fitness instructors will always expect their clients to warm up before starting their planned exercise programme.

Describe a suitable warm up routine that a fitness instructor may use. What are the physical benefits of a warm up before a person starts their planned exercise programme?

Pulse raising – example jogging, cycling, skipping

Mobility/exercises (that take the joints through their full ROM) or example – a golfer performing arm swings, hip circles

Dynamic movements or example – a netballer carrying out short sprints/change of speed/direction or lunges

Stretching or example – development stretches, dynamic stretches linked to sport/open and close the gate groin walk or static/dynamic stretches

Skill rehearsal or example – dribbling drills for football, passing drills for netball

Other example answers

- Increase in body/muscle temperature
- Increase in heart rate
- Increase in breathing rate
- Increase in flexibility of muscles/joints or to loosen joints

Preparing the body/muscles for physical activity/exercise

- Increase in pliability of ligaments/tendons
- Increase in blood flow/oxygen to muscles
- Increase in the speed/strength of muscle contractions
- Improve performance/technique or to practice/rehearse skills
- Delay onset of lactic acid or fatigue/work for longer
- Reduce risk of injury/muscle strain

[6]

Six marks maximum available.

Five marks maximum for suitable warm up for fitness programme.

Five marks maximum for physical benefits.

Do not accept warming up (muscles).

'Loosen up muscles' too vague.

Examiner comments

Most candidates wrote a good description of a suitable warm-up along with a good account of the physical benefits of a warm-up. Once again some candidates did not recognise that the word physical negated any points made about psychological benefits. Those that gave a full account of a warm up including pulse raisers, mobility exercises, dynamic movements, stretching exercises and skill rehearsal type activities scored well. Candidates are reminded that the warm up increases the blood flow and the functions of other body systems and it does not cause the heart to beat – hopefully the heart is already beating!

14 Shin pads in football are one example of protective equipment reducing the risk of injury to football players.

Other than shin pads, give **three** other examples of different types of protective equipment and a sport or activity which each is used for.

- 1. Gum shield in boxing/hockey/rugby
- 2. Helmets in cycling/hockey/cricket
- 3. Scrum cap in rugby/water polo cap

Other example answers

- Goggles in skiing
- Leg guards/pads in cricket
- Elbow/knee pads in mountain biking
- Shoulder pads in American Football
- Chest protector hockey/ice hockey
- Gloves for football goalkeeper
- Equipment that has protective coverings eg post pads

[3]

Mark Scheme Guidance

Any three answers listed acceptable for three marks maximum but must be linked to a sport or activity.

Accept: cycling helmet (because the activity is identified).

Do not accept for two marks a repeat of the same type of equipment e.g. helmet in cycling and helmet in hockey (one mark only).

Accept different protective equipment in the same sport e.g. gum shield in boxing and a helmet in boxing (2 marks). Do not accept shin pads (in the question).

Do not accept footwear.

Do not accept life-saving equipment e.g. life jacket.

Accept any other relevant example.

Examiner comments

A very well answered question and candidates could mostly identify examples of protective equipment and relate this to specific activities/sports. Some candidates gave the example of shin pads which was in the question and so could not be credited. Others gave the same type of protection for example helmets and then linked them to different sports – these candidates usually only scored a single mark because the question requires examples of different types of protective equipment. Candidates are reminded to read each question carefully to avoid any misunderstanding over the requirements of each question.

15 Acute injuries in sport are usually the result of impact or collisions.

Describe types of acute injuries in sport. Explain how these injuries may be treated.

Type: fractures ie open, closed/broken bones **Treatment:** taping, bandaging, splints, slings

Type: pain/lack of movement

Treatment: hot and cold treatments eg heat pack, freeze spray

Type: ligament damage/weakens joint **Treatment:** stretching and massage

Type: soft tissue injuries/sprains

Treatment: R.I.C.E. (Rest, Ice, Compress, Elevate)

Other example answers

Type:

- General points that acute injuries are immediate and short-medium term/contrast this with chronic injuries as a development
- Muscle damage/tearing of muscle
- Concussion
- Headache/dizziness/nausea/loss of balance/memory loss
- Abrasions ie grazes and cuts
- Bleeding
- Contusions ie bruises
- Burst blood vessels/discoloration
- Pain/lack of movement/swelling
- Any other type of relevant sporting injury related to trauma

Treatment:

- SALTAPS on-field assessment routine (See, Ask, Look, Touch, Active, Passive, Strength)
- Action plan to respond to injuries and medical conditions in a sporting context, ie emergency procedures
- Any other suitable treatment methods

[8]

Types and treatment of acute sports injuries.

0 = nil response or response not worthy of credit

MB1 (1-3 marks)

The response shows a limited understanding of the types of common acute sporting injuries.

Candidates provide simple descriptions of a few points from the indicative content. No attempt is made at explanation and there may be some irrelevant material in the answer.

There is little or no use of technical vocabulary and sentences have limited coherence and structure.

Errors in grammar, punctuation and spelling may be noticeable and intrusive.

MB2 (4-6 marks)

The response shows an understanding of some of the types and treatment of common acute sports injuries. Candidates make some valid points from the indicative content with good knowledge and understanding. Some attempt at explanation is made. At this level candidates may address a number of injuries, and at the top of the level one or more of the developed points may be seen. There is some use of technical vocabulary and sentences for the most part are relevant and are coherent.

There are occasional errors in grammar, punctuation and spelling.

MB3 (7-8 marks)

The response shows a detailed understanding of the types and treatment of common acute sports injuries.

Candidates make many points from the indicative content, several of which may be developed. Explanation is clearly given.

The answer is well structured and uses appropriate terminology and technical vocabulary.

There are few if any errors in grammar, punctuation and spelling.

Differentiating between levels look for:

MB1 (1-3 marks):

Where valid indicative points are made they may mainly relate to types and/or causes of acute sports injuries.

Simple description rather than explanation.

Reference to medical conditions (irrelevant).

Some misunderstandings/inaccuracies.

MB2 (4-6 marks):

May be one or more mostly accurate developed points for both types and treatments.

Some explanation.

Show links between injury and relevant treatment.

MB3 (7-8 marks):

Three or more accurate points are developed/expanded for both types and treatments.

Clear explanations.

Accurate and relevant links frequently shown between injury and treatment.

Very few QWC errors.

Not using the developed points **must not** prohibit candidates from achieving the top band or full marks, but is a potential indicator of the level at which they are responding.

Developed points will show:

- Type
- Suitable Treatment.

It would be expected that where **both of** these are used in the response, it would be a MB2 or MB3 response in most cases.

Examiner comments

This question is marked using a levels of response mark scheme and the quality of written communication is taken into consideration. Those candidates who used short, clear sentences that were accurate and contained few spelling errors scored well.

The best candidates made some excellent points describing different acute injuries and then went on to link these with good explanations of how these injuries might be treated. A good range of injuries with well-developed explanations scored best.

Centres are advised to give candidates plenty of extended writing practise at answering these types of questions. Such a question probably takes about ten to twelve minutes to write and should be responded to carefully to avoid simple spelling and grammatical errors.

This question was answered well by the majority of candidates but the minority of candidates simply listed their points and made little effort to link injury with treatment.





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